

1968; Moldenke, Fifth Summ. 1: 72 (1971) and 2: 550 & 895. 1971; Moldenke, Phytologia 39: 253. 1978.

Enriquez records the vernacular name, "htzinte", for this species and has found the plant in flower and fruit in October.

Additional citations: MEXICO: Yucatán: Enriquez 259 (W-2597462).

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ADDITIONAL NOTES ON THE GENUS AEGIPHILA. XXIV

Harold N. Moldenke

AEGIPHILA Jacq.

Additional & emended synonymy: Aegeophila Jacq. ex Moldenke, Brittonia 1: 250, in not. 1934; Prelim. Alph. List Inv. Names [1], in syn. 1940. Aegiphyla Jacq. ex Moldenke, Brittonia 1: 250, in not. 1934; Prelim. Alph. List Inv. Names 4, in syn. 1940. Aegiphylla Jacq. ex Moldenke, Brittonia 1: 250, in not. 1934; Prelim. Alph. List Inv. Names 4, in syn. 1940. Aegyaphila Jacq. ex Moldenke, Brittonia 1: 250, in not. 1934; Prelim. Alph. List Inv. Names 4, in syn. 1940. Aeghyphylla Pohl ex Moldenke, Brittonia 1: 250, in not. 1934; Prelim. Alph. List Inv. Names [1], in syn. 1940. Egyphylla Jacq. ex Moldenke, Brittonia 1: 250, in not. 1934; Prelim. Alph. List Inv. Names 25, in syn. 1940. Brückea Karst. ex Moldenke, Brittonia 1: 250, in not. 1934; Prelim. Alph. List Inv. Names 8, in syn. 1940. Brückea Klotzsch ex Moldenke, Brittonia 1: 250, in not. 1934; Prelim. Alph. List Inv. Names 8, in syn. 1940. Aegyphilla Jacq. ex Moldenke, Phytologia 1: 182, in not. 1937; Suppl. List Inv. Names [1], in syn. 1941. Egiphila Jacq. ex Moldenke, Phytologia 1: 182, in not. 1937; Suppl. List Inv. Names 3, in syn. 1941. Aeguephila Jacq. ex Moldenke, Phytologia 1: 182, in not. 1937; Prelim. Alph. List Inv. Names 4, in syn. 1940. Aegiphita Jacq. ex Moldenke in Fedde, Repert. Spec. Nov. 42: 248, sphalm. 1937; Prelim. Alph. List Inv. Names 4, in syn. 1940. Egiphylla Jacq. ex Moldenke, Prelim. Alph. List Inv. Names 25, in syn. 1940. Echiphylla Jacq. ex Moldenke, Phytologia 1: 377, in not. 1940; Suppl. List Inv. Names 3, in syn. 1941. Stigmatococca Mart. ex Moldenke, Prelim. Alph. List Inv. Names 42, in syn. 1940. Aegyphylla Jacq. ex Moldenke, Suppl. List Inv. Names [1], in syn. 1941. Ageiphila Jacq. ex Moldenke, Phytologia 13: 318, in syn. 1966. Aegipjila Donn. Sm. ex Moldenke, Résumé Suppl. 18: 8, in syn. 1969. Aegyfilla Vell. ex Moldenke, Phytologia 28: 453, in syn. 1974. Stigmatococca "Mart. ex Mold." apud Soukup, Biota 11: 4, in syn. 1976 [not Stigmatococca Willd., 1827]. Aegyphyla Corad., in herb.

Additional & emended bibliography: Jacq., *Select. Stirp. Amer. Hist.* 18 & 26. 1788; Batsch, *Tabl. Aff. Reg. Veg.* 193. 1802; Pers., *Syn. Fl.* 1: 132 & 133. 1805; Pers., *Sp. Fl.* 1: 339, 342, & 343. 1817; Sweet, *Hort. Brit.*, ed. 1, 1: 322 (1826) and ed. 2, 416. 1830; Loud., *Hort. Brit.*, ed. 2, 550. 1832; Sweet, *Hort. Brit.*, ed. 3, 550. 1839; Spach, *Hist. Nat. Veg. Phan.* 9: 226—227. 1840; P. DC. in A. DC., *Prodr.* 9: 512—513. 1845; Schau. in A. DC., *Prodr.* 11: 627, 639, & 647—655. 1847; Schnitzlein, *Iconogr. Fam. Nat.* 2: 137 *Verbenac.* [3]. 1856; Buek, *Gen. Spec. Syn. Candoll.* 3: 9, 19, 73, & 338. 1858; Kuntze, *Rev. Gen. Fl.* 2: 502 & 505. 1891; Rojas Acosta, *Cat. Hist. Nat. Corr.* 76, 172—173, & 206. 1897; Dalla Torre & Harms, *Gen. Siphonog.*, imp. 1, 432. 1904; Loes., *Verh. Bot. Ver. Brand.* 53: 81. 1912; Hubert, *Trav. Lab. Nat. Méd. Fac. Pharm. Paris* 13 (4): 65—67. 1921; Fedde & Schust. in *Just, Bot. Jahresber.* 44: 253. 1922; Pittier, *Man. Fl. Usual. Venez.* 189, 386, & 416. 1926; Wangerin in *Just, Bot. Jahresber.* 46 (1): 717. 1926; Fedde in *Just, Bot. Jahresber.* 44: 1358. 1927; Fedde & Schust. in *Just, Bot. Jahresber.* 47 (2): 244 (1927) and 48 (1): 496. 1927; Wangerin in *Just, Bot. Jahresber.* 49 (1): 301 & 522. 1928; Fedde in *Just, Bot. Jahresber.* 46 (2): 537 (1929) and 47 (2): 270. 1929; Fedde & Schust. in *Just, Bot. Jahresber.* 47 (2): 244. 1929; Fedde in *Just, Bot. Jahresber.* 49 (2): 379. 1932; Yuncker, *Field Mus. Publ. Bot.* 9: 329. 1940; Dalla Torre & Harms, *Gen. Siphonog.*, imp. 2, 432. 1963; Lombardo, *Fl. Arb. & Arbores. Urug.*, ed. 2, 120, fig. 187. 1964; Krapovickas, *Bol. Soc. Argent. Bot.* 11: [256]. 1970; Rouleau, *Guide Ind. Kew.* 7. 1970; Anon., *Commonw. Myc. Inst. Index Fungi* 3: 823. 1972; Airy Shaw in J. C. Willis, *Dict. Flow. Pl.*, ed. 8, 25, 26, 52, 165, 709, 815, & 949. 1973; Altschul, *Drugs & Foods* 245 & 349. 1973; Anon., *Biol. Abstr.* 56 (6): B.A.S. I.C. S.190. 1973; Howard, *Journ. Arnold Arb.* 54: 444. 1973; J. Hutchins., *Fam. Flow. Pl.*, ed. 3, 487 & 910. 1973; Kunkel, *Excerpt. Bot. A.* 21: 115. 1973; Legname, *Lilloa* 33: [326]—333, fig. 1 & 2. 1973; Moldenke, *Biol. Abstr.* 56: 3000. 1973; Rogerson, *Bull. Torrey Bot. Club* 100: 192. 1973; Thorne in Meggers, Ayensu, & Duckworth, *Trop. Forest Ecosyst. Afr. & S. Am.* 35. 1973; Tomlinson, *Journ. Arnold Arb.* 54: 120. 1973; Moldenke, *Phytologia* 27: 352—376 (1973), 27: 505—509 (1974), 28: 426, 433—438, 440, 452—454, 460, 506, & 507 (1974), and 29: 23 & 32. 1974; Anon., *Biol. Abstr.* 57 (7): B.A.S.I.C. E.8. 1974; Asher, *Guide Bot. Period.* 1 (12): 57. 1974; R. F. V. Cooper, *Biol. Abstr.* 57: 3788. 1974; El-Gazzar, *Egypt. Journ. Bot.* 17: 75 & 78. 1974; Gibbs, *Chemotax. Flow. Pl.* 3: 1752. 1974; Heslop-Harrison, *Ind. Kew. Suppl.* 15: 4. 1974; Hocking, *Excerpt. Bot. A.* 23: 291—293. 1974; Howes, *Dict. Useful Pl.* 244. 1974; "H. R.", *Biol. Abstr.* 57: 1904. 1974; León & Alain, *Fl. Cuba*, imp. 2, 2: 280, 305, 309—310, & 321, fig. 132. 1974; Little, Woodbury, & Wadsworth, *Trees P. R. & Virg. Isl.* 2 [U. S. Dept. Agr. Agric. Handb. 449]: xi, 854—856, 991, 994, 997, & 1021, fig. 678. 1974; López-Palacios, *Revist. Fac. Farm. Univ. Los Andes* 14: 21 & 22. 1974; Moldenke, *Biol. Abstr.* 57: 3780, 3783, & 5679 (1974) and 58: 685. 1974; Rogerson & Becker, *Bull. Torrey Bot. Club* 101: 46, 109, & 170. 1974; Troncoso, *Darwiniana*

18: 297, 299, 302, 303, 307, 390—393, 401, 408, & 411, fig. 33 & 34. 1974; Hocking, Excerpt. Bot. A.26: 5. 1975; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 15: 9—10, 22, 27, & 51. 1975; López-Palacios, Bol. Soc. Venez. Cienc. Nat. 31: [353], 365, & 368. 1975; Moldenke, Phytologia 29: 505 (1975), 31: 456 (1975), and 32: 52, 70, 195, 220, 237, & 240. 1975; Molina R., Ceiba 19: 95. 1975; Follmann-Schrag, Excerpt. Bot. A.26: 502. 1976; López-Palacios, Bol. Soc. Venez. Cienc. Nat. 31: 365 & 368 (1976) and 32/33: 397. 1976; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 17: 37—40 & 43. 1976; Steyerl. & Brewer-Carías, Bol. Soc. Venez. Cienc. Nat. 32/33: 197, 205, & 207. 1976; Moldenke, Phytologia 32: 506 (1976), 33: 506 (1976), 34: 162, 164, 252—258, 268, 271, & 498 (1976), and 36: 30—34, 36, 39—41, 47, 52, 53, & 500. 1977; Moldenke, Biol. Abstr. 64: 4787. 1977; J. F. Morton, Quart. Journ. Crude Drug Res. 15: 182—183. 1977; Silberbauer-Gottsberger, Morawetz, & Gottsberger, Biotropica 9: 257 & 259. 1977; Moldenke, Phytologia 38: 256 & 502. 1978.

Airy Shaw (1973) still regards Pseudaegiphila Rusby as a valid monotypic genus.

The Endlicher (1838) reference cited in the bibliography above is often cited as "1836—1856", but the pages involved here were actually issued in 1838.

Thorne (1973) claims 160 valid species in the genus Aegiphila, all restricted to the Americas. The Stigmatococca of Willdenow, referred to in the synonymy above, is a synonym of Ardisia Sw. in the Myrsinaceae.

Gibbs (1974) reports that saponins are absent or probably absent and tannins present or absent in Aegiphila.

The Holm-Nielsen, Jeppesen, Løjtnant, & Øllgaard 2842, Lindeman & Haas 2002, Florman, Sheviak, & Davis 3976, R. F. Steinbach 449, and Vaupal 670, distributed as Aegiphila sp., are not verbenaceous, while Strang s.n. [Herb. Brad. 45715] is Clerodendrum inermis (L.) Gaertn.

An additional excluded species:

Aegiphila spathulata Hayek = Aloysia spathulata (Hayek) Moldenke.

#### AEGIPHILA ALBA Moldenke

Additional bibliography: Moldenke, Phytologia 27: 74 & 157. 1973; Anon., Biol. Abstr. 57 (7): B.A.S.I.C. E.8. 1974; Hocking, Excerpt. Bot. A.23: 293. 1974; Moldenke, Biol. Abstr. 57: 3783. 1974; Thomazini, Øyton 32: 53—60. 1974; Hocking, Excerpt. Bot. A.26: 5. 1975; Moldenke, Phytologia 31: 381, 382, 384, 387, 392, 393, & 405. 1975; Thomazini, Biol. Abstr. 59: 7457. 1975; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 17: 37. 1976; Moldenke, Phytologia 34: 257. 1976.

Little and his associates encountered this species in wet subtropical rainforests, at 1200—1500 m. altitude, in fruit in October.

López-Palacios (1976) cites Duque Jaramillo 4135 and Jiménez SAA.1838, but comments that "Este taxon es muy dudoso y mucho del

material colocado en él no es seguro. El Dr. Moldenke en carta de 17 de diciembre de 1975 me dice: 'Yes, I think the A. grandis-truncata-sessiliflora-alba complex should be studied in the field', y yo agrego que a más del trabajo de campo, debe reinterpretarse todo el material de herbario." He describes his Ecuadorean material of A. alba as from trees 8—15 m. tall, the cymes glomerate, subsessile, very abundant, the flowers 5- or 6-merous, the calyx green, 5-dentate, and the corollas white, and found it flowering in December at 1650 meters altitude.

The Little & Campusano 1145, distributed as A. alba, actually is A. bogotensis (Spreng.) Moldenke.

Additional citations: ECUADOR: Esmeraldas: Asplund 16369 (Ld); Játiva & Epling 1166 (W—2707002). Morona Santiago: Little, Ortega, Samaniego, & Vivar 616 (Ld). Pichincha: Játiva & Epling 543 (N, W—2707178); López-Palacios 4077 (Z), 4235 (Ld).

#### ÆGIPHILA AMAZONICA Moldenke

Additional bibliography: Moldenke, *Phytologia* 25: 289. 1973; Sukup, *Biota* 11: 4. 1976.

Recent collectors refer to this plant as a rather frequent shrub, 1—1.5 m. tall, the stamens white, the fruit orange, and have found it growing in open forests, along disturbed roadsides, and "on savannas with dense trees to 8 m. tall, the predominant species being Physocalymma scaberrima, Curatella americana, and Orbignya speciosa, along with grasses to 1.8 m. tall and other herbs", in flower in March and in fruit in March and July. The corollas are said to have been "white" on Gottsberger & Morawetz 116-13375 and on Prance & al. 20534.

Additional citations: BRAZIL: Amazonas: Gottsberger & Morawetz 116-13375 (Ac); Lleras, Steward, Ongley, Coêlho, Ramos, & Lima P. 16584 (Ld, N); Prance, Campbell, Ongley, Ramos, & Monteiro 20534 (Ld, N).

#### ÆGIPHILA ANOMALA Pittier

Additional bibliography: Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 102—104 & 114. 1973; Moldenke, *Phytologia* 27: 74, 163, & 371 (1973) and 28: 433. 1974; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 17: 37. 1976.

López-Palacios (1976) says: "Como tal fue determinado y distribuido por el Mo. Bot. Gard. al pliego Gentry & Forero 7364 (COL), near mouth of Rio Mutatá, Chocó, ejemplar de cuya determinación dudo, y que más bien parece alguna forma de A. integrifolia."

Other recent collectors have found A. anomala growing along roadsides and in disturbed tropical wet forests and somewhat disturbed premontane wet forests, flowering in May, and fruiting in January, describing it as a spreading tree, 5—7 m. tall, with musky-fragrant flowers, and the fruit "turning pale-yellow". The corollas are said to have been "white" on Nee & Stockwell 11570.

Additional citations: PANAMA: Coclé: Nee & Dwyer 9172 (W-2787119). Panamá: Nee & Stockwell 11570 (W-2787281).

AEGIPHILA ARCTA Moldenke

Additional bibliography: Kunkel, Excerpt. Bot. A.21: 115. 1973; Moldenke, Phytologia 27: 290. 1973; R. F. V. Cooper, Biol. Abstr. 57: 3788. 1974; Hocking, Excerpt. Bot. A.23: 293. 1974; Moldenke, Biol. Abstr. 58: 685. 1974.

AEGIPHILA AUSTRALIS Moldenke

Additional bibliography: Moldenke, Phytologia 25: 290 (1973) and 34: 258. 1976.

Lindeman & Porto describe this species as an "arbusto de 3 m., flor amarelada, folhas com cheiro desagradavel" and found it flowering in November.

Additional citations: BRAZIL: Rio Grande do Sul: Lindeman & Porto ICN.9114 (Ut-320443).

AEGIPHILA BOGOTENSIS (Spreng.) Moldenke

Additional synonymy: Amerina tomentosa DC. apud Buek, Gen. Spec. Syn. Candoll. 3: 19. 1858. Aegiphila mutisii Moldenke, Phytologia 34: 271, in syn. 1976 [not A. mutisii H.B.K., 1817].

Additional & emended bibliography: P. DC. in A. DC., Prodr. 9: 512. 1845; Buek, Gen. Spec. Syn. Candoll. 3: 19. 1858; Moldenke, Phytologia 27: 290, 367, & 368 (1973) and 28: 435 & 437. 1974; Hocking, Excerpt. Bot. A.23: 292. 1974; Moldenke, Phytologia 31: 392. 1975.

López-Palacios describes this species as an "Árbol 10--12 m. Ramas pulverulentas. Cáliz trunco, pero hendido irregularmente en fruto áte verde umbonado cuando inmaturo, amarillo en maduras" and found it growing at 2550--3100 meters altitude, flowering and fruiting in January. His Ecuadorean collection is described by him as from an "arbolito 5--7 m., fl. amarillo crema, 5-mera, fr. amarillento, indumento marrón sucio, cimas 3-floras".

Romero-Castafieda refers to the species as a tree, 12 m. tall, the calyx green and ferruginous, the corollas yellow, the anthers cream-color, and the immature fruit green. He found it in flower and fruit in March at 2000--2400 m. altitude and identified it as "Aegiphila mutisii Moldenke".

Material of A. bogotensis has been misidentified and distributed in some herbaria as A. alba Moldenke.

Additional citations: COLOMBIA: Antioquia: López-Palacios 3583 (Ld, N). Cundinamarca: López-Palacios & Jaramillo Mejía 3668 (Ld, N). Magdalena: Romero-Castafieda 7483 (N, N, N). ECUADOR: Napo: Little & Campusano 1145 (N). Napo-Pastaza: Asplund 17204 (Ld). Pichincha: López-Palacios 4209 (Ld).

AEGIPHILA BOGOTENSIS var. AEQUINOCTIALIS Moldenke

Synonymy: Aegiphila meridensis López-Palacios, Pittieria 5: [34]--[37], fig. 8. 1973.

Additional bibliography: Moldenke, *Phytologia* 27: 74—75, 151, & 153 (1973), 28: 435 & 437 (1974), 31: 392 (1975), and 34: 271. 1976.

Ruiz-Terán and his associates describe this plant as an "Árbol erecto, inerme, perennifolio, 8 m. Ramitas jóvenes con tomento ferrugíneo. Ramitas adultas pardo grisáceo claras. Hojas simples, 3-verticiladas en retoños, opositidecusadas en ramitas adultas, cartáceo-coriáceas, lisas, verde obscuradas, lucientes, por la haz, verde claras sublucientes por el envés, enteras, sin ocelos glandulíferos.....Drupas 4-pirenas, subtendidas por el cáliz acrescente y 2-labiado, rara vez 3-lobado, obovoide-subglobosas" and have found it growing at altitudes of 2550—2700 meters, fruiting in December.

The E. W. Davis 236 collection, cited below, represents a remarkably small-leaved form which may prove to deserve nomenclatural recognition if it proves to be constant; the collector speaks of it as a tree to 4 m. tall and found it growing at 3400 m. altitude, the corollas creamy-yellow, its lobes imbricate, the ovary superior, the fruit "a berry" [actually it is a drupe], 4-seeded, green, ripening yellow. He found it in flower and fruit in December.

*Aegiphila meridensis* was based by López-Palacios on his no. 3031 from El Valle, near Mérida, Mérida, Venezuela, collected on January 1, 1973. All the information previously (1973) given by me under that name in this series of notes should now be transferred here.

Additional citations: VENEZUELA: Mérida: López-Palacios 3013 (N, Z); Ruiz-Teran, López-Figueiras, & López-Palacios 8245 (Ac), 8250 (Z). ECUADOR: Imbabura: E. W. Davis 236 (G, Ld).

#### AEGIPHILA BOGOTENSIS f. TERNATA Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 75 & 368. 1973; Hocking, *Excerpt. Bot. A.*23: 292. 1974.

#### AEGIPHILA BOLIVIANA Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 352. 1973; Hocking, *Excerpt. Bot. A.*26: 5. 1975.

Additional citations: BOLIVIA: Cochabamba: R. F. Steinbach 381 (Ut—328621B).

#### AEGIPHILA BRACHIATA Vell.

Additional & emended bibliography: Schau. in A. DC., *Prodr.* 11: 650—651. 1847; Buek, *Gen. Spec. Syn. Candoll.* 3: 9. 1858; Lombardo, *Fl. Arb. & Arbores. Urug.*, ed. 2, 120. 1964; Moldenke, *Phytologia* 25: 292—293 & 319. 1973; Troncoso, *Darwiniana* 18: 390 & 408. 1974.

The corollas on Hatschbach 35152 are said to have been "greenish-cream" when fresh, while those on Hatschbach 37343 were "cream" and those on Tressens & al. 314 were "white". Hatschbach describes the plant as a shrub, 2—3 m. tall, found it growing in

"capoeira xiloteca", and records the vernacular name, "peloteira", for it. Lindeman & Haas found it growing in rainforests. It has been collected in fruit in December.

It should be noted here that the fig. 33 given by Troncoso (1974) as the male-predominant form of A. hassleri Briq. matches very well most of the specimens at present regarded as representing A. brachiata, as does the Tressens & al. from Corrientes cited below. The two taxa need further intensive investigation. If they prove to be conspecific, A. brachiata is the older name and will have to be adopted.

Additional citations: BRAZIL: Paraná: Hatschbach 3031 (N, W—2706991), 35152 (Ld), 37343 (Ld); Lindeman & Haas 3404 (Ld, Ws). Santa Catarina: Smith & Reitz 12451 (Au—249871). PARAGUAY: Woolston 1201 (W—2692381). ARGENTINA: Corrientes: Tressens, Arbo, Carnevali, & Correa 314 (Ml).

#### AEGIPHILA BRACTEOLOSA Moldenke

Additional bibliography: Schau. in A. DC., Prodr. 11: 649. 1847; Buek, Gen. Spec. Syn. Candoll. 3: 9. 1858; Moldenke, Phytologia 25: 293 & 325. 1973; Soukup, Biota 11: 4. 1976; Moldenke, Phytologia 36: 40. 1977.

Maas describes this plant as a common shrub in secondary vegetation along roadsides, 1 m. tall, with white flowers and yellow fruit in March, while Davis describes it as a tree, 4 m. tall, growing in the moist remnants of primary forests, with creamy-white corollas, flowering in October.

The Lindeman & Haas 373, distributed as A. bracteolosa, actually is A. yellowiana Cham.

Additional citations: COLOMBIA: Vaupés: E. W. Davis 103 (G). BRAZIL: Amazonas: Maas & Maas 214 (Ut—328608B, Ut—328609B).

#### AEGIPHILA BRASILIENSIS Moldenke

Additional bibliography: Moldenke, Phytologia 25: 294. 1973.

#### AEGIPHILA BREVIFLORA (Rusby) Moldenke

Additional bibliography: Moldenke, Phytologia 27: 352. 1973.

#### AEGIPHILA BUCHTIENII Moldenke

Additional bibliography: Moldenke, Phytologia 27: 352. 1973.

#### AEGIPHILA CANDELABRUM Briq.

Additional bibliography: Moldenke, Phytologia 27: 75. 1973; Troncoso, Darwiniana 18: [392], fig. 34j. 1974; Moldenke, Phytologia 36: 33. 1977.

Illustrations: Troncoso, Darwiniana 18: [392], fig. 34j. 1974.

Lindeman & Haas describe this plant as a "leaning shrub, 2.5 m. tall, fruit via olive-yellow turning red (7 1/2R<sub>4</sub>/12), also the pulp, 4 seeds", and found it growing in varzea land at the border of a forest on slopes at 180 m. altitude, fruiting in June. Irwin and his associates refer to it as a liana, to 6 m. long,

the "receptacle" [=calyx?] green, and the fruit orange, and have found it growing in gallery forests in an area of cerrado and gallery forest, at 525 m. altitude, fruiting in March.

Additional citations: BRAZIL: Minas Gerais: Irwin, Fonsêca, Souza, Reis dos Santos, & Ramos 26809 (N). Paraná: Lindeman & Haas 1664 (Ld).

#### AEGIPHILA CAPITATA Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 290. 1973.

#### AEGIPHILA CASSELIAEFORMIS Schau.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 9. 1858; Moldenke, *Phytologia* 27: 290. 1973.

#### AEGIPHILA CAUCENSIS Moldenke

Synonymy: Aegiphila caucensis López-Palacios, in herb.

Additional bibliography: Moldenke, *Phytologia* 27: 148 (1973) and 28: 434. 1974; Moldenke, *Biol. Abstr.* 57: 5679. 1974; Hocking, *Excerpt. Bot. A.* 26: 5. 1975; Moldenke, *Phytologia* 34: 254. 1976; Soukup, *Biota* 11: 4. 1976.

López-Palacios and Idrobo refer to this plant as an "Arbusto 1—2 m. Talles blanquecinos. Frutos amarillos, inmaduros aramillo-verdosos", found it growing at 1050 m. altitude, fruiting in August.

Additional citations: COLOMBIA: Arauca: López-Palacios 3943 (Ld). Valle del Cauca: López-Palacios & Idrobo 3710 (N, Z).

#### AEGIPHILA CEPHALOPHORA Standl.

Additional bibliography: Moldenke, *Phytologia* 27: 75. 1973; Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 102, 104—105, & 144. 1973; Moldenke, *Phytologia* 34: 253. 1976.

Croat describes this species as a vine, to 8 m. long, with white caducous flowers. The Burgers, who are the first collectors to have encountered this species outside of Panama, describe it as a woody climber, climbing to 10 feet into forest trees, with its leaves pale yellowish-green and the corollas yellowish-white. They found it growing in areas of remnant original forest now being logged on small hills of otherwise cleared agricultural land, at an altitude of 150—250 meters, in flower in August. Gentry & Mori describe it as a shrub, 2.5 m. tall, or a small tree, 5 m. tall, with cream-colored corollas and green fruit in January. They found it in lower montane wet forests at 1300—1420 m. altitude. Mori & Dressler refer to it as a "small tree, 4 m. tall", the corollas white.

The Gentry, Tyson, & Dwyer 3491, distributed as A. cephalophora, appears to be A. hoehnei var. spectabilis Moldenke instead.

Additional citations: COSTA RICA: Heredia: Burger & Burger 8133 (N). PANAMA: Colón: Mori & Dressler 7911 (N). Darién: Gentry & Mori 13622 (Ld), 13755 (Z). Barro Colorado Island: Croat 1465 (W—2730182).



AEGIPHILA CHRYSANTHA Hayek

Additional bibliography: Moldenke, Phytologia 27: 352 & 376 (1973) and 31: 384. 1975; Soukup, Biota 11: 4. 1976.

Recent collectors describe this species as a shrub, 1--2 m. tall, or as a vine or liana climbing to treetops, the leaves undulate, shiny, deep-green, the flowers fragrant, the calyx green, the stamens and stigma white, and the fruit at first green, then turning bright-orange. They have found it growing on terra firma along roadsides, in cacao plantations, high woods, and rainforests, at altitudes of 680--1290 meters, flowering in December, and fruiting in April, July, and November. Pinheiro found it "em brotos".

The corollas are said to have been "yellow" on Santos 767, "deep yellow-green" on Schunke 5200, and "brilliant yellow 5Y9/9" on Schunke 5852.

Material of this species has been distributed in some herbaria as Solanaceae. On the other hand, the Hatschbach & Guimarães 19047, distributed as A. chrysantha, actually is A. lanceolata Moldenke, a closely related taxon.

Additional citations: ECUADOR: Los Ríos: Asplund 15539 (Ld). PERU: Huánuco: Schunke Vigo 5200 (N, W--2746350); F. Wolfe 12361 (F--1728087). Loreto: Schunke Vigo 5852 (Ld). BRAZIL: Amazonas: France, Maas, Woolcott, Monteiro, & Ramos 15922 (Ws). Bahia: Pinheiro 1023 (N); T. S. Santos 767 (Ld).

AEGIPHILA CHRYSANTHA var. GLABRA Moldenke

Additional bibliography: Moldenke, Phytologia 25: 296 & 297. 1973; Soukup, Biota 11: 4. 1976.

AEGIPHILA CORDATA Poepp.

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 9. 1858; Moldenke, Phytologia 27: 75 & 164 (1973) and 34: 257. 1976; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 17: 38. 1976; Soukup, Biota 11: 4. 1976.

Recent collectors describe this species as a vine, 3 m. long, or as a shrub, 4 m. tall, with pubescent leaves, the fruit yellow (immature?) or red. The corollas are said to have been "brilliant-greenish-yellow (7.5 Y 9/9)" on Schunke 5684. The plant has been encountered at 210--300 m. altitude, flowering in December, fruiting in June and December.

The Holm-Nielsen, Jeppesen, Løjtnant, & Øllgaard 2844, distributed as A. cordata, is not verbenaceous.

Additional citations: PERU: Amazonas: Ancuash 543 (W--2786610). Loreto: Schunke Vigo 6652 (W--2703809). San Martín: Schunke Vigo 5684 (N).

AEGIPHILA CORDATA var. COLOMBIANA Moldenke

Additional bibliography: Moldenke, Phytologia 25: 297--298 & 321. 1973; López-Palacios, Revist. Fac. Farm. Univ. Los Andes

17: 38. 1976.

López-Palacios (1976) cites Cuatrecasas 13993 from Valle del Cauca, Haught 1885 from Santander, and Uribe 5874 from Antioquia, Colombia, but comments: "No serán más bien alguna forma de Aegiphila fendleri? Al examinar sus floras vi en ellas las brácteas (bractéolas) 3-laciniadas características de la Ae. fendleri. Yo he colocado en este último taxon a Uribe 1357 (COL), Acacias, Meta, y en mis notas he escrito lo siguiente: 'Ojalá Cáliz glabro, cubierto por brácteas trifido-laciniadas, muy similares a las que aparecen en los ejemplares colocados bajo Ae. cordata var. colombiana, pero en ésta el cáliz es indumentado'. En verdad que fuera de lo anterior no encuentro entre ellas ninguna otra diferencia."

**AEGIPHILA CORDATA** var. **VILLOSISSIMA** (Moldenke) Moldenke

Additional bibliography: Moldenke, *Phytologia* 25: 298 (1973) and 34: 257. 1976.

Flowman describes this plant as a shrub with scandent branches, 2.5 m. tall, the calyx dull yellowish-green, and the fruit orange, and encountered it in rocky woods, flowering and fruiting in April.

Additional citations: PERU: Huáncayo: Flowman 5816 (Ld). BRAZIL: Acre: Prance, Maas, Kubitaki, Steward, Ramos, Pinheiro, & Lima 11828 (N). Mato Grosso: Krukoff 1300 (W—photo of type).

**AEGIPHILA CORDIFOLIA** (Ruiz & Pav.) Moldenke

Additional & emended bibliography: Pers., *Syn. Pl.* 1: 133. 1805; Pers., *Sp. Pl.* 1: 343. 1817; Buek, *Gen. Spec. Syn. Candoll.* 3: 73. 1858; Moldenke, *Phytologia* 27: 290—291 & 364. 1973; Soukup, *Biota* 11: 4. 1976.

**AEGIPHILA COSTARICENSIS** Moldenke

Additional bibliography: Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 102 & 144. 1973; Moldenke, *Phytologia* 27: 291 (1973) and 28: 452. 1974; López-Palacios, *Revist. Fac. Farm. Univ. Los Andes* 17: 43. 1976.

Gentry & Mori describe this species as a treelet, 5 m. tall, with white corollas, and encountered it in "lower montane wet forest — premontane wet forest transition" areas, at 1400 m. altitude, flowering in February.

Additional citations: PANAMA: Bocas del Toro: Kirkbride & Duke 593 (N). Darién: Gentry & Mori 14170 (Ld).

**AEGIPHILA COWANI** Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 63, 76, & 82 (1973) and 28: 437. 1974; Moldenke, *Biol. Abstr.* 57: 3780. 1974.

Additional citations: GUYANA: Cowan & Soderstrom 2022 (N—*isotype*).

**AEGIPHILA CUATRECASASI Moldenke**

Synonymy: Aegiphila cuatrecasasi Moldenke, *Phytologia* 36: 40, in syn. 1977.

Additional bibliography: Hocking, *Excerpt. Bot. A.*21: 30. 1972; Moldenke, *Phytologia* 27: 76 & 361 (1973) and 36: 40. 1977.

**AEGIPHILA CUATRECASASI var. NITIDA Moldenke**

Additional bibliography: Hocking, *Excerpt. Bot. A.*21: 30. 1972; Moldenke, *Phytologia* 27: 76. 1973.

López-Palacios & Idrobo describe this plant as an "árbol de 4--7 m., meduloso y quebradizo. Infructescencias erectas. Drupas verdes de 2 cm. de diámetro" and found it growing at 1700 m. altitude, fruiting in September.

Additional citations: COLOMBIA: Cauca: López-Palacios & Idrobo 3755 (Ld, N).

**AEGIPHILA CUNEATA Moldenke**

Synonymy: Aegiphila cuneata var. cuneata Simpson ex Moldenke, *Phytologia* 31: 392, in syn. 1975.

Additional bibliography: Moldenke, *Phytologia* 25: 300--301 (1973) and 31: 392. 1975; Soukup, *Biota* 11: 4. 1976.

Material of this species has been misidentified and distributed in some herbaria as Cephaelis sp. or Faramea sp. On the other hand, the Schunke Vigo 1337, distributed as A. cuneata, actually is A. umbraculiformis Moldenke.

Additional citations: PERU: Madre de Dios: R. E. Schultes 6455 (W--1953408).

**AEGIPHILA CUNEATA var. HIRSUTISSIMA Moldenke**

Additional bibliography: Moldenke, *Phytologia* 25: 301. 1973; Soukup, *Biota* 11: 4. 1976.

The Schunke Vigo 1374, distributed as A. cuneata var. hirsutissima, actually is A. umbraculiformis Moldenke.

**AEGIPHILA DEPPEANA Steud.**

Additional & emended bibliography: Schau. in A. DC., *Prodr.* 11: 654--655. 1847; Buek, *Gen. Spec. Syn. Candoll.* 3: 9. 1858; Loes., *Verh. Bot. Ver. Brand.* 53: 81. 1912; Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 103, 119--120, & 144. 1973; Moldenke, *Phytologia* 27: 291 (1973), 28: 452 (1974), and 36: 40. 1977.

Recent collectors have found this plant growing in black sandy soil covered by primary vegetation, at 6 m. altitude, flowering in December. Martínez Calderón refers to the flowers as "green".

Material of A. deppeana has been misidentified and distributed in some herbaria as "Clerodendron sp."

Additional citations: MEXICO: Oaxaca: Orcutt 3057 (E--1716559), 3418 (E--2168581). Veracruz: Martínez Calderón 1221 (N); Edw. Palmer 464 (E--778764). COLOMBIA: Magdalena: H. H. Smith 881 (Ld), 1864 (Ld).

**AEGIPHILA ELATA Sw.**

Additional bibliography: Sweet, Hort. Brit., ed. 1, 1: 323 (1826) and ed. 2, 416. 1830; Loud., Hort. Brit., ed. 2, 550. 1832; Sweet, Hort. Brit., ed. 3, 550. 1839; Buek, Gen. Spec. Syn. Candoll. 3: 9. 1858; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 103, 117—118, & 144. 1973; Moldenke, Phytologia 27: 291—292 & 359 (1973) and 28: 434, 435, 452, & 453. 1974; Howes, Dict. Useful Pl. 244. 1974; León & Alain, Fl. Cuba, imp. 2, 2: 309 & 310, fig. 132. 1974; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 15: 51. 1975; Molina R., Ceiba 19: 95. 1975; Moldenke, Phytologia 31: 381 (1975), 34: 254 (1976), and 36: 39. 1977.

Additional illustrations: León & Alain, Fl. Cuba, imp. 2, 2: 310, fig. 132. 1974.

Breteler describes this plant as a shrub, 2 m. tall, slightly straggly in growth, the leaves papery in texture, with glands along the midrib, slightly glossy and medium-green above, paler beneath, the calyx pale-green, the corolla yellow, its tube about 8 mm. long. He found it growing in an open site at the edge of a rivulet, at 350 m. altitude, flowering in May. Dwyer & Dieckman encountered it at sealevel to 50 feet altitude. The leaf-blades on J. V. Santos 2315 are conspicuously acute basally.

The Breteler 3921 collection, cited below, was previously misidentified by me as possibly being A. floribunda Moritz & Moldenke and I am indebted to Santiago López-Palacios for this correction in determination. He describes the species in Colombia as an "arbusto de unas 3 m. Inflorescencias terminales. Cáliz fructífero erodado. Frutos amarillos". He found it in fruit in December. Other recent collectors refer to the plant as a shrub with arching branches or as a scrambling shrub, 10—12 feet tall, and have found it growing in premontane wet forests from sealevel to 300 feet altitude, flowering in August.

The corollas on Dwyer 11111 & 11174 and on Fernández-Pérez & Jaramillo Mejía 7103 are said to have been "yellow" when fresh, while on Pittier 12017 they were "yellowish", on Dwyer & Dieckman 13033 & 13040 "lemon-yellow", and "cream" on Gentry 8601. On Adams 8069 the corolla-buds are said to have been "yellow, open in pale-yellow".

Both Sweet (1830) and Loudon (1832) call this species "tall aegiphila" and list it as among the cultivated plants of Great Britain, introduced from the West Indies in 1823.

The Storck 48 1/2, distributed as A. elata, actually is A. panamensis Moldenke.

Additional & amended citations: MEXICO: Veracruz: J. V. Santos 2315 (Au—263538). GUATEMALA: El Petén: Contreras 3374 (Au—228048), 9905 (W—2795349). BELIZE: Dwyer 11111 (N), 11174 (N); Dwyer & Dieckman 13033 (W—2787809), 13040 (W—2787798, Ws); A. Gentry 8601 (W—2788520). COSTA RICA: Puntarenas: Pittier 12017 (P). JAMAICA: C. D. Adams 8069 (Ma); Collector undetermined s.n.

[Port Royal Mts., Aug. 1840] (Pd); Morley & Whitford 763 (W—2724784); Proctor 23913 (Ld). TRINIDAD AND TOBAGO: Trinidad: Herb. Trin. Bot. Gard. 2384 (W—1361144). COLOMBIA: Caldas: Fernández-Pérez & Jaramillo Mejía 7103 (N). Norte de Santander: López-Palacios 3575 (Ld, N). VENEZUELA: Barinas: Breteler 3921 (W—2465845).

**AEGIPHILA ELATA** var. **MACROPHYLLA** (H.B.K.) López-Palacios

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 9. 1858; Moldenke, Phytologia 27: 292 & 359 (1973) and 28: 435, 452, & 453. 1974; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 15: 51. 1975; Moldenke, Phytologia 34: 254. 1976.

López-Palacios refers to this plant as an "arbusto escandente de unos 4 m. Flores amarillas muy claras". He found it in flower in November.

Additional citations: COLOMBIA: Arauca: López-Palacios 3940 (Ld, N). MOUNTED CLIPPINGS: Moldenke, Brittonia 1: 470—471. 1934 (W).

**AEGIPHILA ELEGANS** Moldenke

Additional bibliography: Moldenke, Phytologia 27: 353. 1973; Soukup, Biota 11: 4. 1976.

**AEGIPHILA EXIGUIFLORA** Moldenke

Additional bibliography: Rizzini in Ferré, Simpos. Sôbre Cerrado 119. 1962; Moldenke, Phytologia 25: 308. 1973.

**AEGIPHILA FALCATA** Donn. Sm.

Additional bibliography: Moldenke, Phytologia 27: 79 & 166. 1973; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 102, 113—114, 144, & 145. 1973; Molina R., Ceiba 19: 95. 1975; Moldenke, Phytologia 34: 252. 1976.

Molina (1975) records this species from Honduras. Kirkbride & Duke describe it as a shrub, 3 m. tall, with orange-yellow fruit, and found it fruiting in April.

The Warner & White 61, distributed as A. falcata, actually is A. integrifolia var. guianensis (Moldenke) López-Palacios.

Additional citations: GUATEMALA: Quezaltenango: Tonduz & Rojas 148 (E—869008). PANAMA: Bocas del Toro: Kirkbride & Duke 464 (N).

**AEGIPHILA FARINOSA** Moldenke

Additional bibliography: Moldenke, Phytologia 25: 309. 1973; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 17: 38. 1976.

López-Palacios (1976) says: "Existe el ejemplar típico de Cuatrecasas 21696 (VALLE), hoya del río Cali, lado derecho del Pichindé, La Palma, 24-7-1946, 2500 m., y la cita López-Figueiras 8307 (US), Phytologia 2: 392. 1947. El ejemplar de Cuatrecasas corresponde a otros interpretados por mí como Ae. odontophylla.

Debe hacerse una comparación de los tipos de ambos taxa, pues es muy posible que tanto el material colombiano como el venezolano colocado en Ae. odontophylla necesite nuevo estudio."

**AEGIPHILA FASCICULATA** Donn. Sm.

Additional bibliography: Moldenke, *Phytologia* 25: 310. 1973; Molina R., *Ceiba* 19: 95. 1975; Moldenke, *Phytologia* 34: 252. 1976. Molina (1975) records this species from Honduras.

**AEGIPHILA FENDLERI** Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 292. 1973; López-Palacios, *Revist. Fac. Farm. Univ. Los Andes* 17: 38. 1976.

López-Palacios (1976) suggests that A. cordata var. colombiana Moldenke may belong in the synonymy of A. fendleri, and, indeed, this is very possible. I await his further field studies.

**AEGIPHILA FERRUGINEA** Hayek & Spruce

Additional bibliography: Moldenke, *Phytologia* 25: 310 & 413. 1973.

López-Palacios describes this species as an "arbol 8—12 m., muy meduloso, frs. esféricos, umbilicados, cáliz florifero aparentemente trunco o 4-apiculado, fructifero erodado y verruculoso" and found it growing at 2000 m. altitude, in flower and fruit in December.

Additional citations: ECUADOR: Pichincha: López-Palacios 4075 (2).

**AEGIPHILA FILIPES** Mart. & Schau.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 9. 1858; Moldenke, *Phytologia* 27: 353, 354, & 376 (1973), 28: 437 (1974), and 34: 256. 1976; Soukup, *Biota* 11: 4. 1976.

Recent collectors describe this plant as a shrub, 6—10 feet tall, or a tree, 4—5 m. tall, the leaves "shiny dark-green above, pale-green beneath", the calyx pale-green, the immature fruit yellowish-green or yellow, and the mature fruit orange. They have found it growing in high woods or at the edges of woods or in low frequently inundated forests, at altitudes of 75—2000 m., flowering in January and July, fruiting in May and September.

The corollas are said to have been "yellowish-white" on Mc Daniel, Fernando, & Leonel 2644 and "yellowish-green" on Garcia Barriga, Stout, & Jaramillo M. 18953, while on Killip & Smith 26882 they are described as with "petals greenish-white, anthers white".

McDaniel and his associates report that in Peru the plant is used medicinally externally in treating skin troubles: "one spoonful of leaves rubbed gently on affected area 3 times per day until well". They report the vernacular name, "arco sacha", for this species as well as for species of Cestrum.

Díaz Piedrahita and his associates describe A. filipes as "frúctices de ramas péndulas, haz foliar verde oscuro, envés verde pálido".

ido; frutos naranja, cáliz y pedúnculo verde oscuro; los frutos inicialmente son verdes, al madurar viran hacia amarillo y luego a naranja hasta pasar a negro". They found it in fruit in July at 1300 m. altitude.

The Steyermark, Delascio, Dunsterville, & Dunsterville 103520, distributed as A. filipes, actually is A. floribunda Moritz & Moldenke.

Additional citations: COLOMBIA: Cundinamarca: García-Barriga, Stout, & Jaramillo Mejía 18953 (Oa). Huila: Díaz Piedrahita, Lozano C., & Torres R. 678 (Ld). PERU: Loreto: Croat 19233 (W—2800333, Ws), 19748 (N, W—2800329, W—2800330, Ws), 20207 (W—2800334, Ws); Killip & Smith 26882 (E—1017497); McDaniel, Fernando, & Leonel 2644 (W—2667256). San Martín: Schunke Vigo 4002 (Ld).

#### AEGIPHILA FLORIBUNDA Moritz & Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 292. 1973.

Steyermark and his associates describe this species as a tree, 3 m. tall, the leaves membranous, rich-green above, dull-green beneath, the pedicels pale-green, and the corollas creamy-yellow. They encountered it at 1750—1800 m. altitude, flowering in August.

Material of A. floribunda has been misidentified and distributed in some herbaria as A. filipes Mart. & Schau. On the other hand, the Breteler 3921, previously cited by me as A. floribunda, actually seems to be A. elata var. macrophylla (H.B.K.) López-Palacios.

Additional citations: VENEZUELA: Lara: Steyermark, Delascio, Dunsterville, & Dunsterville 103520 (Mu).

#### AEGIPHILA FLUMINENSIS Vell.

Additional synonymy: Aegiphila fluminensis Vell. ex Moldenke, *Phytologia* 34: 271, in syn. 1976.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 9. 1858; Hubert, *Trav. Lab. Mat. Méd. Fac. Pharm. Paris* 13 (4): 67. 1921; Moldenke, *Phytologia* 27: 292 (1973) and 34: 271. 1976.

Hubert (1921) reports of this species that "les feuilles sont employées comme diaphorétiques".

Recent collectors describe this plant as a vine or shrub, 2—3 m. tall, the calyx green, and the fruit green (in June), and have found it in anthesis and fruit in June. The corollas are said to have been "white" on Pereira 5646, Pinheiro & Santos 2335, and Santos 2653 and "cream" on Pinheiro 1340.

Additional citations: BRAZIL: Bahia: Pinheiro 1340 (N); Pinheiro & Santos 2335 (N); T. S. Santos 2653 (Ld). Espírito Santo: Pereira 9843 [Herb. Brad. 36974] (Mu, N). Guanabara: E. Pereira 5646 [Herb. Brad. 21235] (Mu). Rio de Janeiro: Vianna 998 [Oliveira 292; Herb. Dept. Conserv. Ambient. 11652] (Ld); Vianna, Oliveira, Araujo, & Carauta s.n. [Vianna 988; Herb. Dept. Conserv.

Ambient. 12627] (Ac).

**AEGIPHILA FOETIDA Sw.**

Additional bibliography: Sweet, Hort. Brit., ed. 1, 1: 323 (1826) and ed. 2, 416. 1830; Loud., Hort. Brit., ed. 2, 550. 1832; Sweet, Hort. Brit., ed. 3, 550. 1839; Buek, Gen. Spec. Syn. Candoll. 3: 9. 1858; Moldenke, Phytologia 25: 313—314 (1973) and 36: 39. 1977.

Both Sweet (1830) and Loudon (1832) call this species the "fetid aegiphila" and list it as cultivated in Great Britain, introduced from the West Indies in 1800. Howard & Proctor describe it as a shrub, 9 feet tall, with cream-colored sessile fruit in January, and encountered it on wooded limestone hilltops at 2000 feet altitude.

Additional citations: JAMAICA: Howard & Proctor 15047 (Ld); Purdie s.n. (Pd).

**AEGIPHILA FROESI Moldenke**

Additional bibliography: Moldenke, Phytologia 25: 314. 1973.

Additional citations: BRAZIL: Acre: Prance, Maas, Kubitaki, Steward, Ramos, Pinheiro, & Lima 12505 (N).

**AEGIPHILA GLABRATA Moldenke**

Additional bibliography: Moldenke, Phytologia 25: 287 & 314. 1973; Soukup, Biota 11: 4. 1976.

**AEGIPHILA GLANDULIFERA Moldenke**

Additional bibliography: Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 102, 108—109, & 144. 1973; Moldenke, Phytologia 27: 292—293, 296, & 298 (1973) and 28: 435 & 452. 1974; El-Gazzar, Egypt. Journ. Bot. 17: 75 & 78. 1974; Soukup, Biota 11: 4. 1976; Moldenke, Phytologia 34: 255 (1976) and 36: 33. 1977.

Additional citations: COLOMBIA: Meta: López-Palacios 3923 (Ac, N).

**AEGIPHILA GLANDULIFERA var. PARAËNSIS Moldenke**

Additional bibliography: Moldenke, Phytologia 25: 315 (1973) and 36: 33. 1977.

Prance and his associates refer to this plant as a tree, 4 m. tall, with greenish-white corollas, and found it growing in partially cleared varzea forest, white-water flooded, flowering in July.

Additional citations: BRAZIL: Amazonas: Prance, Lleras, Steward, Ongley, Coelho, Ramos, & Lima 16746 (Ld, N).

**AEGIPHILA GLOMERATA Benth.**

Additional bibliography: Moldenke, Phytologia 27: 79. 1973.

López-Palacios describes this species as a tree, 6—8 m. tall, with yellowish-green 4-merous flowers, conspicuously bracteolate, male-predominant, the bractlets green, and found it growing at



44 m. altitude, flowering in December. The corollas on Barclay 632 are said to have been "yellow" when fresh, and this collector encountered the plant in loam soil in woods, flowering in November.

Additional citations: ECUADOR: Guayas: Asplund 15355 (Ld). Manabí: López-Palacios 4081 (Z). SALANGO ISLAND: G. W. Barclay 632 (W-2779779).

#### AEGIPHILA GLORIOSA Moldenke

Additional bibliography: Moldenke, *Phytologia* 25: 316. 1973; Hocking, *Excerpt. Bot. A.22*: 291. 1974; Moldenke, *Phytologia* 31: 384 (1975) and 36: 40. 1977.

Anderson found this species growing in dense inundated vegetation of trees and vines along the edge of a river at flood level, at 200-300 m. altitude, flowering in February. He describes the plant as having vine-like stems to 3 m. tall and yellow corollas. Santos describes the species as "planta herbáceo-arbustiva raminosa", the corollas yellow, and found it in anthesis in May.

Additional citations: BRAZIL: Bahia: T. S. Santos 3016 (N). Pará: W. R. Anderson 10849 (N, Z).

#### AEGIPHILA GLORIOSA var. PARAENSIS Moldenke

Synonymy: Aegiphila gloriosa var. paraensis Hocking, *Excerpt. Bot. A.23*: 291. 1974.

Additional bibliography: Moldenke, *Phytologia* 25: 316. 1973; Hocking, *Excerpt. Bot. A.23*: 291. 1974; Moldenke, *Phytologia* 36: 40. 1977.

#### AEGIPHILA GRANDIS Moldenke

Additional & emended bibliography: Moldenke in Fedde, *Repert. Spec. Nov.* 33: 125 & 141. 1933; Moldenke, *Brittonia* 1: 263, 284-286, 289-290, 473, 475, & 476. 1934; Moldenke, *Phytologia* 1: 206, 207, 224, & 271. 1937; Fedde & Schust. in *Just, Bot. Jahresber.* 60 (2): 568 & 569. 1940; Moldenke, *Phytologia* 2: 91. 1944; Moldenke, *Alph. List Cit.* 1: 133, 222, 243, & 326 (1946), 2: 335, 337, 344, & 352 (1948), 3: 694 & 758 (1949), and 4: 1005, 1006, 1068, 1069, 1074, 1076, & 1078. 1949; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 58, 59, 62, & 175. 1949; Moldenke, *Phytologia* 4: 354 & 415. 1953; J. F. Macbr., *Field Mus. Publ. Bot.* 13 (5): 714. 1960; Moldenke, *Phytologia* 7: 506 (1961) and 8: 17. 1961; Moldenke, *Biol. Abstr.* 37: 215. 1962; Moldenke, *Phytologia* 13: 326 & 341. 1966; Moldenke, *Fifth Summ.* 1: 114, 121, & 379 (1971) and 2: 846 & 848. 1971; Moldenke, *Phytologia* 27: 80, 293, 362, & 370-371 (1973), 28: 434, 435, & 452 (1974), and 34: 255. 1976; López-Palacios, *Revist. Fac. Farm. Univ. Los Andes* 17: 38-41. 1976; Moldenke, *Phytologia* 36: 31, 33, 40, & 41. 1977.

López-Palacios and his associates describe this plant as an "árbol erecto, inerme, de 8-22 m. Tronco cilíndrico, 40 cm. D. A.P. Corteza pardo rojiza, fisurada. Unas hojas enteras y otras con denticulaciones, verdes, pero algunas jóvenes con envés de tinte ligerísimamente violáceas. Flores blancas pentámeras en

cimas axilares [or "en cima reducidas"]. Cáliz verde trunco. Corola blanca. Fruto verrucoso cerca da 1/2 cm. de diámetro." He feels, after extensive field studies, that A. grandis, A. sessiliflora, and A. truncata are all conspecific and adopts A. grandis as the name for the taxon. I am inclined to agree, but feel that the mostly distinctly lobed calyxes (and fruiting-calyxes) of A. sessiliflora are indicative of a varietal status for it. On a number of specimens previously cited by me as A. sessiliflora the calyx-rim is not plainly visible so I am tentatively re-citing these specimens here under typical A. grandis.

Recent collectors describe A. grandis as a large, erect, unarmed, leafy tree, 4—25 m. tall, often heavily laden with fruit clusters, the trunk cylindric, 25—40 cm. in diameter at breast height, the bark gray or "pardo rojiza", fissured in many small plates, "de copa muy ancha", the flowers small, borne in small axillary clusters (cymes, not "panicles" as stated by some collectors), pentamerous, very fragrant, the calyx green, the filaments white, anthers brownish, style and stigma white, the fruit persistent, clustered, green, and the fruiting-calyx green-ferruginous. They have found it growing on wooded and steep river slopes, in coffee plantations, and in matorrales. It is said to be "rare" by Archer.

The corollas are described as "white" on Barclay & al. 3330, García-Barriga 10941, 11009, & 12494, López-Palacios 3893, and Uribe 4433. Recent collectors have found the plant in flower in April, July, August, and from October to January, fruiting in January, March to June, August, and September, growing at 950—2650 m. altitude. They record the vernacular names, "oreja de burro" and "queso fresco".

Lasser describes the plant as an "Árbol tronco recto, copa irregular, ± 10 m."

It should be noted that one twig on García-Barriga 12494 in the Britton Herbarium exhibits a few plainly lobed calyxes, although all the other calyxes on the specimen are truncate-rimmed. The fruit on Cuatrecasas 21007 is mostly solitary or in 2's and sessile or subsessile.

What seems to be this same species has recently been found by López-Palacios at altitudes of only 5—900 meters in Ecuador, fruiting in December.

Luteyn and his associates refer to A. grandis as a small tree, to 6 m. tall, the flowers very sweet-smelling and attractive to bees, the "perianth pale-green, fruit white", asserting that it is used as a hedge between pastures.

Material of A. grandis has been misidentified and distributed in some herbaria as A. cuatrecasasi Moldenke, A. integrifolia (Jacq.) Jacq., A. sessiliflora Moldenke, and even Lucuma sp. The López-Palacios 3615, cited below, was previously regarded by me as A. truncata Moldenke, while his nos. 3625 & 3672 were regarded by me as A. sessiliflora.

On the other hand, the Cuatrecasas 17075, previously regarded by me as A. grandis, is better placed as A. grandis var. sessiliflora (Moldenke) Moldenke, while Cuatrecasas 8700 is A. moldenkeana López-Palacios and Core 723, Daniel 3282, García-Barriga 8386, Metcalf & Cuatrecasas 30072, Mutis 3657 & 4554, Tomas 1512, and Triana 2080 are A. novogranatensis Moldenke.

Additional & emended citations: COLOMBIA: Antioquia: Archer 589 (W—1517393); López-Palacios 3893 (N, Z). Caldas: López-Palacios 4031 (Ld); López-Palacios & Idrobo 3850 (Ld, N). Cundinamarca: Barclay, Juajibioy, & Gama 3330 (W—2702383), 3519 (W—2702146), 3591 (W—2702108); Cuatrecasas 9635 (W—1795903), 13610 (N, W—1851421); García-Barriga 10941 (W—1852169), 11009 (N, W—1852206), 12494 (N, W—1901295); López-Palacios 3625 (Ld, N), 3672 (N, Z); López-Palacios & Jaramillo Mejía 3672 (Z); Luteyn, Dumont, & Buritica 4837 (Ld, N); Mutis 5191 [Macbride photos 30183] (F—photo, G—photo, Kr—photo, N, N—photo, W—1560083, Z—photo); Uribe-Uribe 4433 (W—2569890). Huila: Little 7940 (N, N, W—2110408). Santander: López-Palacios 3614 (Ac, N, Z), 3615 (Ld, N). Valle del Cauca: Cuatrecasas 21007 (N, W—2512524). VENEZUELA: Trajillo: Lasser 1167 (W—1908975); Ruiz-Terán & López-Palacios 7609 (Z). ECUADOR: El Oro: López-Palacios 4104 (Ld), 4108 (Ld). MOUNTED CLIPPINGS: Moldenke, Brittonia 1:289-290.1934(W).

AEGIPHILA GRANDIS var. CUATRECASASI (Moldenke) López-Palacios, Revist. Fac. Farm. Univ. Los Andes 17: 39-40. 1976.

Synonymy: Aegiphila sessiliflora var. cuatrecasasi Moldenke, Phytologia 8: 385. 1962. Aegiphila grandis var. cuatrecasasi (Moldenke) López-Palacios, Revist. Fac. Farm. Univ. Los Andes 17: 39. 1976.

Bibliography: Moldenke, Phytologia 8: 385. 1962; Hocking, Excerpt. Bot. A.6: 455. 1963; Moldenke, Biol. Abstr. 42: 1517. 1963; Moldenke, Phytologia 13: 340. 1966; Moldenke, Fifth Summ. 1: 114 (1971) and 2: 848. 1971; Moldenke, Phytologia 27: 361-362 (1973), 28: 435 (1974), and 34: 255. 1976; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 17: 39-40. 1976; Moldenke, Phytologia 36: 31, 40, & 41. 1977.

López-Palacios & Idrobo refer to this plant as an "árbol de 12 m. x 0.40 cms. DAP" [surely an error for either 4 or 40 cm.!), found it at 1750 m. altitude, fruiting in September.

Citations: COLOMBIA: Magdalena: Cuatrecasas & Castañeda 25404 (W—orig. descr., Z—type). Valle del Cauca: López-Palacios & Idrobo 2824 (Ld).

AEGIPHILA GRANDIS var. SESSILIFLORA (Moldenke) Moldenke, Phytologia 36: 31 & 41, hyponym. 1977; comb. nov.

Synonymy: Aegiphila sessiliflora Moldenke in Fedde, Repert. Spec. Nov. 33: 139. 1933.

Bibliography: Moldenke in Fedde, Repert. Spec. Nov. 33: 139.

1933; Moldenke, Brittonia 1: 255, 264, 301—302, & 472. 1934; Moldenke, Phytologia 1: 267 (1937), 1: 398 (1940), and 3: 46—47. 1948; Moldenke, Known Geogr. Distrib. Avic. 18. 1939; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 30 & 85. 1942; Moldenke, Alph. List Cit. 1: 11 & 133 (1946) and 4: 1064, 1076, 1078, & 1296. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 59 & 175. 1949; Moldenke, Phytologia 4: 412. 1953; Moldenke, Résumé 65 & 441. 1959; Moldenke, Phytologia 7: 502. 1961; Moldenke, Résumé Suppl. 12: 2 & 3. 1965; Moldenke, Phytologia 13: 328 & 339—340 (1966) and 27: 361—362. 1973; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 9 (13): 50—51. 1973; Moldenke, Phytologia 36: 31, 32, & 41. 1977.

Recent collectors describe this plant as a small or large tree, 5—12 m. tall, with white wood, the leaves "herbáceas, gruesas, verde grisáceas", the fruit green, borne in "glomerules", the fruiting-calyx more or less lobed. They have found it growing in the open, at altitudes of 5—1700 meters, fruiting from March to May and August, flowering in July.

Additional & amended citations: COLOMBIA: Antioquia: Archer 392 (A—photo of type, B—photo of type, D—photo of type, F—photo of type, G—photo of type, K—photo of type, N—photo of type, P—photo of type, S—photo of type, W—1470995—type, W—photo of type, W—mounted orig. descr., Z—photo of type). Cauca: E. L. Core 206 (W—2059687). Cundinamarca: Cuatrecasas 13600 (N, W—1851414); Fernández & Mora 1402 (W—2144385). Huila: Little & Ramírez 7800 (N, W—2140373). Valle del Cauca: Cuatrecasas 17075 (N).

#### AEGIPHILA GRAVEOLENS Mart. & Schau.

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 9. 1858; Hubert, Trav. Lab. Mat. Méd. Fac. Pharm. Paris 13 (4): 67. 1921; Moldenke, Phytologia 27: 293. 1973.

Hubert (1921) reports that this species "dont les fleurs ont une odeur repoussante, ce qui leur fait donner le nom de fleurs de Bouc. La décoction de feuilles est employée, en lavage pour certaines maladies de peau, et in bains, dans le cas de rhumatismes articulaires". Santos describes the species as a tree, 5 m. tall, the "flor exverdeada" in November.

Additional citations: BRAZIL: Bahia: Santos 2507 (Z). São Paulo: Leitão Filho 380 [Herb. Inst. Agr. Camp. 19916; Herb. Cent. Conserv. Nat. 6289] (Fe, Z).

#### AEGIPHILA GUIANENSIS Moldenke

This taxon is now known as A. integrifolia var. guianensis (Moldenke) López-Palacios, which see.

#### AEGIPHILA HASSLERI Briq.

Additional synonymy: ? Aegiphila poliantha Rojas, Cat. Hist. Nat. Corrient. 76, 172—173, & 206, hyponym. 1897. Aegiphila polyantha Rojas apud Heslop-Harrison, Ind. Kew. Suppl. 15: 4.

1974.

Additional bibliography: Rojas Acosta, Cat. Hist. Nat. Corrient. 76, 172--173, & 206. 1897; Lombardo, Fl. Arb. & Arbores. Urug., ed. 2, 120 & 121, fig. 187. 1964; Krapovickas, Bol. Soc. Argent. Bot. 11: [256]. 1970; Moldenke, Phytologia 27: 75, 81--82, & 358. 1973; El-Gazzar, Egypt. Journ. Bot. 17: 75 & 78. 1974; Heslop-Harrison, Ind. Kew. Suppl. 15: 4. 1974; Troncoso, Darwiniana 18: 390--393 & 408, fig. 33 & 34 a--i. 1974; Moldenke, Phytologia 31: 387 & 392 (1975) and 34: 268. 1976.

Illustrations: Lombardo, Fl. Arb. & Arbores. Urug., ed. 2, 121, fig. 187. 1964; Troncoso, Darwiniana 18: 391 & [392], fig. 33 & 34 a--i. 1974.

It seems quite probable to me that this taxon does not deserve more than varietal rank under the very similar A. brachiata Vell., or, if Troncoso's interpretation in regard to its sexual dimorphism is correct, then it must be reduced to synonymy under A. brachiata, the earlier name.

The corollas on Schinini & al. 26016 are said to have been "white". Porto & Oliveira refer to the fruit as "verdes e amarelados" in February.

The Krapovickas & al. 21326 collection, cited below, exhibits remarkably small and hairy leaves and certainly bears very close resemblance to typical A. brachiata. The collectors describe it as a tree, 4 m. tall, with white flowers, and found it in woods. The Tressens, Arbo, Carnevali, & Correa 314, distributed as A. hassleri, certainly represents classical A. brachiata.

Aegiphila poliantha is a poorly described taxon which probably belongs in the synonymy here. The original description is merely: "139. Salvia silvestre, aegiphila poliantha (Roj.) Corrientes. Esta planta voluble es propia de los vallados; de flores parecidas á las de la margarita morada i frutos pequeños, globulosos i negruzcos en la madurez. Propiedades: Análogas á las Aeg. salutaris de H. B. Kth....120— Salvia silvestre, aegiphila poliantha (Roj.) Planta de fruto negro-morado que sirva para tinta. En medicina pueda servir como sudorifico (?) para badona (?). Salvia cimarrona." Nothing else is known of it.

Additional citations: BRAZIL: Paraná: Hatschbach 24186 (W--2705826), 32890 (Ld). Rio Grande do Sul: Porto & Oliveira ICN. 9631 (Ut--320444). PARAGUAY: Hassler 8632 (E--1575072). ARGENTINA: Corrientes: Krapovickas, Cristóbal, Maruffak, Mriginsky, Pire, & Pueyo 21326 (Ld). CULTIVATED: Argentina: Krapovickas, Cristóbal, Schinini, Arbo, Quarín, & González 26016 (Ld).

#### AEGIPHILA HAUGHTII Moldenke

Additional bibliography: Moldenke, Phytologia 25: 319--320. 1973; Soukup, Biota 11: 4. 1976.

Schunke Vigo describes this plant as a shrub, 3--4 m. tall, "las láminas de las hojas son onduladas brillosas de color verde pálido" or "de color verde amarillenta", the corollas white, the

sepals pale-green or yellowish-green, the stamens white, and the "antheras pardas". He encountered it in high woods, flowering in September and October.

Material of A. haughtii has been misidentified and distributed in some herbaria as "Clerodendron tessmannii Moldenke". On the other hand, the Croat 17922 and McDaniel 16155, distributed as A. haughtii, actually are Clerodendrum tessmani Moldenke.

Additional citations: PERU: San Martín: Schunke Vigo 4484 (N, W—2746273), 5005 (N, W—2746330).

AEGIPHILA HIRSUTA var. COLOMBIANA Moldenke

Additional bibliography: Moldenke, *Phytologia* 25: 320 (1973) and 27: 164. 1973.

AEGIPHILA HIRSUTISSIMA Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 293. 1973; Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 103, 116—117, & 144. 1973; R. F. V. Cooper, *Biol. Abstr.* 57: 3788. 1974.

AEGIPHILA HOEHNEI Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 293. 1973; Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 102, 103, 118—119, & 144. 1973.

AEGIPHILA HOEHNEI var. PUYENSIS Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 293. 1973. Lugo refers to this plant as a shrub, 3 m. tall, with yellow corollas, and found it in flower in March.

Additional citations: ECUADOR: Napo—Pastaza: Asplund 19426 (Ld). Pastaza: Lugo S. 678 (W—2781665).

AEGIPHILA HOEHNEI var. SPECTABILIS Moldenke

Additional bibliography: Moldenke, *Phytologia* 25: 296 & 321. 1973; Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 102, 103, 118—119, & 144. 1973.

Gentry and his associates describe this plant as a shrub with "straggly" branches and orange-colored fruit.

Additional citations: PANAMA: Panamá: Gentry, Tyson, & Dwyer 3491 (N).

AEGIPHILA HOFFMANNIOIDES Standl. & Steyerl.

Additional bibliography: Moldenke, *Phytologia* 25: 321—322. 1973.

Additional citations: GUATEMALA: Huehuetenango: J. A. Steyermark 48843 (Au—190684—photo of type).

AEGIPHILA INSIGNIS Moldenke

Additional bibliography: Moldenke, *Phytologia* 25: 322 (1973) and 27: 355. 1973; Soukup, *Biota* 11: 4. 1976.

Schunke Vigo, who has recently re-discovered this rare species, describes it as a liana, 8-9 m. long, the corollas "brilliant yellow (5 Y 9/9)", and found it in flower in January at 450 m. altitude.

Additional citations: PERU: San Martín: Schunke Vigo 5746 (W-2703924).

#### AEGIPHILA INTEGRIFOLIA (Jacq.) Jacq.

Additional & amended bibliography: Jacq., *Select. Stirp. Amer. Hist.* 18: 1788; Pers., *Syn. Pl.* 1: 132 & 133. 1805; Pers., *Sp. Pl.* 1: 342. 1817; Sweet, *Hort. Brit.*, ed. 1, 1: 322 (1826) and ed. 2, 416. 1830; Loud., *Hort. Brit.*, ed. 2, 550. 1832; Sweet, *Hort. Brit.*, ed. 3, 550. 1839; Schau. in A. DC., *Prodr.* 11: 647 & 649. 1847; Buek, *Gen. Spec. Syn. Candoll.* 3: 9 & 73. 1858; Howard, *Journ. Arnold Arb.* 54: 444. 1973; Moldenke, *Phytologia* 27: 353 & 373 (1973) and 28: 434, 435, 437, 438, & 452. 1974; Hocking, *Excerpt. Bot. A.* 23: 293. 1974; López-Palacios, *Revist. Fac. Farm. Univ. Los Andes* 14: 21. 1974; Troncoso, *Darwiniana* 18: 393 & 408. 1974; López-Palacios, *Revist. Fac. Farm. Univ. Los Andes* 15: 9. 1975; Moldenke, *Phytologia* 31: 382 (1975) and 34: 162, 164, & 255. 1976; López-Palacios, *Revist. Fac. Farm. Univ. Los Andes* 17: 37. 1976; Soukup, *Biota* 11: 4. 1976; Moldenke, *Biol. Abstr.* 64: 4787. 1977; Moldenke, *Phytologia* 36: 32, 40, & 53. 1977.

Recent collectors describe this widespread species as a ligneous, spreading or subsucculent herb or shrub, 1-2 m. tall, or a tree, 3.5-18 m. tall, the stems pithy, inflorescence axillary, umbelloid, flower-buds greenish-white, flowers fragrant, and fruit yellow, red-orange, or reddish. They have found it growing in capoeira, open areas, weedy habitats along roads and agricultural fields, open savannas, secondgrowth forests, subtropical and mountain forests, poorly drained forests, mature tropical moist forests, and the "edge of banana fields near the upper limit of cultivation", at altitudes of sealevel to 2100 meters, flowering from April to June, August to October, and in December, fruiting in January, July, and December.

The corollas are said to have been "white" on Gentry & Berry 14654, Grant 10163, Klug 3468, López-Palacios 3654 & 4184, Purse-glove P. 6483, and Wurdack & Adderley 42905, "whitish" on Hatschbach 34084, "purplish-white" on Schunke 6531, "greenish" on Croat 20529, and "yellow" on Chrestowski 70-353 and Lugo S. 175.

López-Palacios and his associates say of it "Arbusto, árbol, arbolito [or "sufrútice"] de 2-7 m., erecto, ramificado, inerme. Hojas opositidecussadas, flaccido-membranosas. Flores blancas 4-meras. Cáliz verde amarillento. Corola blanca al principio, luego marrón. Androceo blanco. Drupas primero verdes, luego amarillas a amarillo anaranjadas. Especie esparcida....La hoja macerada da una especie de jabón que se usa contra erupciones." He also notes of it: "Sólo para control de localidad" in Venezuela. McCurdy refers to it as "common"; Wurdack & Adderley found it to be "an occasional shrub", but Irwin and his associates call it a "common shrub". Chrostowski encountered it "in low purma (brush) at old

terrace level in very acid sandy clay loam, 1100—1200 mm. ppt., 25° C." Hallé refers to it as a shrub or small tree, with green calyxes and white corollas.

The vernacular names, "tabacote", "arco", and "tabaco caspi", have been recorded for A. integrifolia in Venezuela, Colombia, and Peru, respectively.

Both Sweet (1830) and Loudon (1832) include this species among the plants cultivated in Great Britain in their day and assert that it was introduced from Trinidad in 1820. They call it the "arborescent aegiphila". Buek (1858) and others include A. arborescens  $\beta$  breviflora Schau. in the synonymy of typical A. integrifolia, but I feel that it belongs, rather, in the synonymy of A. bracteolosa Moldenke, unless, of course, we may have here again a case of sexual dimorphism.

The Lasser 1167, distributed as A. integrifolia and previously reported by me as A. sessiliflora Moldenke, actually is A. grandis Moldenke. I am indebted to my friend and colleague, Santiago López-Palacios, for this correction. The Maguire & Stahel 22782, cited below, is a mixture with Amasonia campestris (Aubl.) Moldenke. Bruijn 1015, distributed as typical A. integrifolia, actually represents var. guianensis (Moldenke) López-Palacios, while Troll 1704 is var. lopez-palacii Moldenke.

Additional citations: PANAMA: Darién: Stern, Chambers, Dwyer, & Ebinger 663 (W—2396631). VIRGIN ISLANDS: St. Thomas: Finlay s.n. [Antilles St. Thomas 1841] (P). TRINIDAD AND TOBAGO: Trinidad: Purseglove P.6483 [Herb. Trin. Bot. Gard. 18149] (W). COLOMBIA: Amazonas: Foldats 282A (W—2705445). Boyacá: Lawrence 548 (Ca—M293524, Ld). Chocó: Killip 35495 (W—1772204); Warner & Warner 61 (N, W—2770592). Córdoba: López-Palacios 3856 (Ac, N). Cundinamarca: López-Palacios 3909 bis (N, Ws). Meta: M. L. Grant 10163 (W—2107007); Little & Little 8227 (W—2140513). Putumayo: Schultes & Smith 2027 (E—1839059). Santander: Gentry & Renteria 19975 (N). Valle del Cauca: Cuatrecasas 17369 (W—2816327). VENEZUELA: Amazonas: Wurdack & Adderley 42905 (W—2320888). Bolívar: Gentry & Berry 14654 (N); López-Palacios 3015 (N); Oberwinkler & Oberwinkler 15377 (Mu); Ruiz-Terán, Carobot, & Morales 10691 (Ac); Ruiz-Terán & López-Palacios 10873 (Ld), 10908 (Mi), 11665 (Tu). Sucre: Ruiz-Terán & López-Palacios 10081 (Ld); Steymark & Rabe 96092 (W—2584222). SURINAM: Maguire & Stahel 22782. in part (N). FRENCH GUIANA: Aublet s.n. [F. G. Meyer photo 4067] (Gz—photo of type, W—photo of type); Hallé 1121 (N, P); Maguire & Fanshawe 23080 (W—1902649). ECUADOR: Napo: López-Palacios 4184 (Ld); Lugo S. 175 (W—2781668). Napo-Pastaza: Mexia 7173 (Ca—743335), 7187 (Ca—743325), 7289 (Ca—743352). PERU: Huánuco: Macurdy 1001 (F—1728083). Loreto: Croat 20529 (W—2786740).



San Martín: Chrostowski 70-353 (Ws); Klug 3468 (W-1457865); Schunke Vigo 6531 (W-2703976). BRAZIL: Amapá: Irwin, Egler, & Murça Pires 47161 (W-2400716). Amazônas: López-Palacios 3654 (Ld, N); Poeppig 1615 (W-photo). Mato Grosso: Hatschbach 34084 (Ld). Minas Gerais: Mexia 4500 (Au-120679). Roraima: Coradin & Cordeira 607 (N). BOLIVIA: La Paz: M. Bang 584 (Pd, W-photo). MOUNTED CLIPPINGS: Jacq., Stirp. Amer. 15. 1763 (W).

AEGIPHILA INTEGRIFOLIA var. GUIANENSIS (Moldenke) López-Palacios, Revist. Fac. Farm. Univ. Los Andes 14: 21. 1974.

Synonymy: Aegiphila guianensis Moldenke in Fedde, Repert. Spec. Nov. 13: 125-126. 1933. Aegiphila arborea Spruce ex Moldenke, Phytologia 1: 206, in syn. 1937. Aegiphila guianensis Aristeguieta ex Moldenke, Fifth Summ. 1: 379, in syn. 1971.

Bibliography: Moldenke in Fedde, Repert. Spec. Nov. 33: 125-126. 1933; Moldenke, Brittonia 1: 340-341. 1934; Moldenke, Phytologia 1: 206. 1937; Moldenke, Geogr. Distrib. Avic. 18-20 & 24. 1939; Moldenke, Phytologia 1: 389. 1940; Moldenke, Prelim. Alph. List Inv. Names 1. 1940; Moldenke, Alph. List Inv. Names 1. 1942; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 30, 32, 35, & 85. 1942; Moldenke, Alph. List Cit. 1: 326. 1946; Moldenke, Phytologia 2: 395 (1947) and 2: 436. 1948; Moldenke, Alph. List Cit. 2: 337, 603, & 610 (1948), 3: 820, 905, & 956 (1949), and 4: 1006. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 58, 62, 65, 74, & 175. 1949; Moldenke, Phytologia 4: 389-390 & 432. 1953; Moldenke, Résumé 65, 69, 74, 86, 228, & 441. 1959; Moldenke, Phytologia 13: 326-327 (1966), 25: 318 (1973), and 27: 81 & 293. 1973; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 9 (13): 26-27 (1973), 14: 21 (1974), and 15: 9. 1975; Moldenke, Phytologia 28: 434, 435, 437, 438, & 452 (1974), 31: 382 (1975), and 34: 255. 1976.

All the data recorded by me previously in this series of notes and elsewhere under A. guianensis should now be transferred to A. integrifolia var. guianensis.

López-Palacios and his associates describe this plant as an "Árbol [or] arbusto [or] arbolito erecto, de 3-15 m, inerme, ramificado, perennifolio, 1,5-7 m. Hojas opositidecussadas, membranosas [or] firmamente membranosas a membranoso-subcartaceas, verde oscuras por la haz, más claras por el envés. Hojas adultas pequeñas, grandes las de brotes jóvenes. Infructescencias en cimas dicótomo-corimboideas. Corola blanca."

Other recent collectors describe it as a spreading shrub or small tree, 2-4 m. tall, the leaves papery, dull, pale- or medium-green above, paler green beneath, the young inflorescence greenish, the calyx green or pale-green, the corollas white or dirty-white, anthers brown, and the fruit at first green but maturing orange-yellow [Werner & White say "mature fruit green", but surely in error!].

Recent collectors have found the plant growing in dense tidal forests, open disturbed ground, and secondary forests or regrowth,

from sealevel to 850 m. altitude, flowering in March, June, July, and December, and fruiting in March, July, October, and December. Lee records the vernacular name, "tete viaja".

The Prance, Coêlho, Harley, Kubitzki, Maas, Sastre, & Smith 11680, cited below, was previously regarded by me as typical A. integrifolia (Jacq.) Jacq. The Breteler 4905 and Killip & Cuatrecasas 39091, also cited below, have much the aspect of typical A. integrifolia -- the under surface of the mature leaves is not observable on the specimens seen, but the densely velutinous immature leaves cause me to suspect that they probably represent the present variety. On the other hand, Aristeguieta 4215, is very different in aspect and bears hardly any resemblance at all to A. integrifolia. It is very probable that two taxa are here represented and the material needs to be re-studied.

López-Palacios (1975) comments that "Ae. guianensis y Ae. integrifolia están constituidas en Venezuela por poblaciones muy dudosas y de difícil interpretación, en especial el material de la parte de la costa y de los Edos. Mérida y Barinas.... He considerado conveniente hacer una reducción de esta especie [A. guianensis] a variedad..... y entonces quedarían aquí los especímenes más indumentados o de envés tomentoso, incluido Blanchet 2121, es decir, aquellos ejemplares que consideraba Schauer 'lanuginoso-pubescente' (Prodr. 11: 649)."

The label accompanying E. L. Little 7769, cited below, originally was inscribed "7768", but this number was struck out and "7769" substituted by some unknown hand.

Material of A. integrifolia var. guianensis has been distributed in some herbaria as A. falcata Donn. Sm., a very different taxon of Central America!

Additional & emended citations: COLOMBIA: Arauca: López-Palacios 3950 (N). Caquetá: E. L. Little 7769 (W-2140364). Chocó: Killip & Cuatrecasas 39091 (N, W-1856920). Cundinamarca: López-Palacios 3909 (N, Ws). Meta: López-Palacios 3914 (Id, N), 3918 (N, Tu). Nariffo: López-Palacios 3950 (Id). Valle del Cauca: Cuatrecasas 14846 (W-2815034); V. H. Lee 72 (Oa); López-Palacios & Idrobo 3848 (Ac, N). VENEZUELA: Barinas: López-Palacios 3116 (N). Bolívar: Ruiz-Terán & López-Palacios 11125 (Id), 11656 (Id). Mérida: Bernardi 6495 (W-2279384); López-Palacios 3159 (N). Táchira: Breteler 4905 (N, W-2583290a, W-2583291a). Trujillo: Ruiz-Terán & López-Palacios 7639 (Id). Zulia: Bruijn 1015 (N). GUYANA: Schomburgk 404 in part (W-photo of type). BRAZIL: Amazonas: Prance, Coêlho, Harley, Kubitzki, Maas, Sastre, & Smith 11680 (W-2699642). MOUNTED CLIPPINGS: Moldenke in Fedde, Repert. Spec. Nov. 33: 125-126. 1933 (W).

AEGIPHILA INTEGRIFOLIA var. LOPEZ-PALACII Moldenke, Phytologis 36: 53. 1977.

Bibliography: Moldenke, Biol. Abstr. 64: 4787. 1977; Moldenke, Phytologia 36: 32 & 53. 1977.

Collectors describe this plant as a shrub, 2-4 m. tall, and have encountered it in "pajonales" and along rivers, at 1500 m. altitude, flowering in March, April, and July. The corollas are said to have been "white" on Lugo S. 896 & 991.

Citations: ECUADOR: Napo: Boeke 2209 (N); López-Palacios 4257 (Z-type); Lugo S. 896 (W-2781666), 991 (W-2781667). BOLIVIA: La Paz: Troll 1704 (Mu).

#### AEGIPHILA INTERMEDIA Moldenke

Additional bibliography: Moldenke, Phytologia 27: 294. 1973.

The Eitens refer to this plant as an herb, 1 m. tall, the corolla "ivory-color", and the style white, and encountered it at the edge of "carrasco" (secondary scrub of cerradão) at 150 meters altitude.

Additional citations: BRAZIL: Maranhão: Eiten & Eiten 10811 (W-2757747).

#### AEGIPHILA LAETA H.B.K.

Additional bibliography: Buek, Gen. Spec. Candoll. 3: 9. 1858; Fedde & Schust. in Just, Bot. Jahresber. 48 (1): 496. 1927; Moldenke, Phytologia 27: 294, 298, & 375. 1973; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 102, 105, & 144. 1973; Moldenke, Phytologia 34: 255 & 256. 1976.

Recent collectors describe this species as a simple-branching subshrub, shrub, or alluvial forest tree, or even herbaceous, 1-5 m. tall, the branches decussate, the upper leaves entire, some of the lower ones crenate, the inflorescence greenish when immature, the cymes axillary or terminal, corymbose, and the fruit [erroneously referred to as "berries" by some collectors], yellow-orange or orange-red, red when mature, and have found it growing in sand and loam soil in bushy shaded ravines, from sea-level to 200 meters altitude, flowering in April, July, November, and December, fruiting in February, October, and November.

The corollas are described as "cream"-color by López-Palacios, while in Ebinger 243 they are said to have been "white" and on Nee 7289 they were "yellow".

Material of this species has been misidentified and distributed in some herbaria as A. panamensis Moldenke, while the Pittier 10533, cited below, was previously erroneously cited by me as A. martinicensis Jacq.

Additional citations: PANAMA: Canal Zone: M. Nee 7289 (W-2787121). San Blas: A. Gentry 6398 (W-2800090). Barro Colorado Island: Ebinger 243 (W-2728874). TABOGA ISLAND: G. W. Barclay 2498 (W-2779727). COLOMBIA: Antioquia: Pring 5 (E-905318). Arauca: López-Palacios 3936 (Ld, N, N), 3941 (Ac, N). VENEZUELA: Barinas: López-Palacios 3973 (Ld). Zulia: López-Palacios 1889 (Ld); Pittier 10533 (B, Cb, N, N-photo, W-1887211, Z-photo).

**AEGIPHILA LAEVIS (Aubl.) Gmel.**

Additional bibliography: Sweet, Hort. Brit., ed. 2, 416. 1830; Loud., Hort. Brit., ed. 2, 550. 1832; Sweet, Hort. Brit., ed. 3, 550. 1839; Buek, Gen. Spec. Syn. Candoll. 3: 9. 1858; Moldenke, Phytologia 27: 294 (1973), 29: 32 (1974), and 36: 39. 1977.

Recent collectors describe this plant as a vine climbing to 1.5 m. on shrubs, the stems woody below, the calyx and [young] fruit green, and have found it growing by the sides of streams, in flower in June and in both flower and fruit in January. The corollas are said to have been "pale greenish-yellow" on Santos & al. 1793. Schunke Vigo reports that the leaves are used as an insecticide in Peru.

Both Sweet (1830) and Loudon (1832) list this species as cultivated in Great Britain, introduced from Guiana in 1824, and call it the "smooth aegiphila".

Material of A. laevis has been misidentified and distributed in some herbaria as A. falcata Donn. Sm. Maguire & Stahel 22782 is a mixture with Amasonia campestris (Aubl.) Moldenke.

Additional & emended citations: COLOMBIA: Valle del Cauca: Cuatrecasas 14302 (W-2772735), 15946 (W-2772825), 17567 (W-2816209). SURINAM: Maguire & Stahel 22782 in part (N). FRENCH GUIANA: Aublet s.n. (Gz--photo of type); Collector undetermined s.n. (Pd). BRAZIL: Bahia: Pinheiro 1728 (Ld), 1797 (N). Mato Grosso: Santos, Souza, & Ferreira R. 1793 (N).

**AEGIPHILA LANCEOLATA Moldenke**

Additional bibliography: Moldenke, Phytologia 27: 294 (1973), 28: 437 & 438 (1974), and 36: 34. 1977.

Recent collectors describe this plant as a woody vine or liana (or even as "herbaceous"), to 7 m. long, and have found it growing in gallery forests or primary forests or terra firma, flowering in February, and with yellow or orange fruit in February and July. The branches and petioles are characteristically long-hispid, thus easily distinguishing it from the very similar and closely related A. chrysantha Hayek, A. microcalycina Moldenke, and A. vitelliniflora Klotzsch. Campbell and his associates report the "calyx green, buds green, pistils green, filaments yellow, anthers brown". The corollas are said to have been "cream-color" when fresh on Hatschbach 26170 and "yellow" on Hatschbach & Guimarães 19047.

Material of A. lanceolata has been misidentified and distributed in some herbaria as A. chrysantha Hayek.

Additional citations: PERU: Loreto: Schunke Vigo, Mathias, & Taylor 5444 (F-1728082). BRAZIL: Amazonas: Campbell, Ongley, & Ramos P.21979 (Ld, N). Goiás: Hatschbach 34269 (Ld). Mato Grosso: Hatschbach 26170 (Ld). Paraná: Hatschbach & Guimarães 19047 (W-2705908).

**AEGIPHILA LAXICUPULIS Moldenke**

Synonymy: Aegiphila laxicupula Moldenke, Prelim. Alph. List

Inv. Names 2, in syn. 1940. Aegiphila laxicaulis Moldenke, Suppl. List Inv. Names [1], in syn. 1941. Aegiphila laxicupulis "Moldenke in Fedde", in herb. Aegiphila laxicupulis "Moldenke", in herb.

Additional bibliography: Moldenke, *Phytologia* 25: 444 (1973) and 27: 84 & 166. 1973; Molina R., *Ceiba* 19: 95. 1975; Moldenke, *Phytologia* 36: 30. 1977.

Recent collectors describe this plant as a shrub, 5—15 feet tall, and have encountered it in shrubby thickets and along small streams in cafetal in seasonal evergreen forests, at 200 meters altitude, flowering in October. The corollas are said to have been "cream"-color on Breedlove 28551. Molina (1975) reports the species from Honduras.

Material of A. laxicupulis has been misidentified and distributed in some herbaria as A. panamensis Moldenke.

Additional citations: MEXICO: Chiapas: Breedlove 28551 (Ld, Mi). GUATEMALA: Jutiapa: Harmon & Dwyer 3335 (Ws). NICARAGUA: Chontales: Marshall & Neill 6539 (Z).

#### AEGIPHILA LAXIFLORA Benth.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 9. 1858; Moldenke, *Phytologia* 27: 353. 1973.

Additional citations: TRINIDAD & TOBAGO: Trinidad: W. E. Broadway s.n. [Buenos Ayres, May 9, 1919] (E-862847).

#### AEGIPHILA LEWISIANA Moldenke

Additional bibliography: Moldenke, *Phytologia* 27: 353 (1973), 28: 435 (1974), and 31: 382. 1975; López-Palacios, *Revist. Fac. Farm. Univ. Los Andes* 15: 10. 1975.

Ruiz-Terán & López-Palacios describe this plant as an "Arbusto erecto, inerme, ramificada, 2,5 m. Hojas opositidecussadas, firmemente membranosas, virtualmente glabras. Drupas inmaduras globoso-obovoides, amarillo verdosas, 8—10 mm. de diámetro, el ápice con cicatriz hundida" and found it growing at 50—180 m. altitude, fruiting in July.

López-Palacios (1975) comments that "Yo he distribuido mi ejemplar 3492 como Ae. lewisiana, basado más que todo en sus infrutescencias terminales y de pocos frutos. Hoy tengo duda de esa interpretación a causa de sus cálices completamente truncos y de sus frutos lisos cuando frescos y arrugados cuando secos, pero no escabrosos como los del tipo (Fendler 844, GH). Sin embargo, lo conservo aquí porque no sé hasta donde llegue la variación de la especie. Sabré agradecer los informes que a esta respecto se me comuniquen."

Additional citations: VENEZUELA: Bolívar: Ruiz-Terán & López-Palacios 11537 (Ld).

#### AEGIPHILA LHOTZKIANA Cham.

Additional synonymy: Aegiphilla lhotzhiana Cham. ex Moldenke, *Phytologia* 31: 292, in syn. 1975.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 9.

1858; Moldenke, *Phytologia* 27: 353—354 (1973), 28: 438 (1974), and 31: 392. 1975.

Recent collectors describe this species as a shrub or treelet, 1.5—2.5 m. tall, thin, erect, unbranched until near the top, the trunk to 6 cm. in diameter, with corky bark, the fruit green in January, and have found it growing "in a dense scrub area of cerrado vegetation plus a few trees", in "capoeira", and "in degraded cerrado, young barbatimão trees and shoots 1—3 m. tall spaced 2—5 m. apart, the ground recently burned", at altitudes of 720—1000 m., flowering in October, in fruit in January. Prance & his associates refer to the plant as a "subshrub 5 cm. tall", but this is doubtless an error for 5 dm. or even 5 m. They describe the corollas as "pale-green". The corollas on Hatschbach 26120 & 37702 and on Hatschbach & Koczicki 33088 are said to have been "cream"-color when fresh, while on Mattos & Mattos 8418 they were "white, filaments green, anthers white". It has also been found in flower in January.

Additional citations: BRAZIL: Goiás: Hatschbach 37702 (Ld); Irwin, Onishi, Fonsêca, Souza, Reis dos Santos, & Ramos 25325 (Ws); Irwin & Soderstrom 7477 (M, N, W—2752377). Mato Grosso: Eiten & Eiten 9463 (W—2689080); Hatschbach 26120 (Ld); Hatschbach & Koczicki 33088 (Ld); Prance, Lleras, & Coêlho 18948 (Ld, N). São Paulo: Eiten & Eiten 2435 (Ln—188311, Mu), 7794 (W—2757759); Mattos & Mattos 8418 (W—2745209).

*AEGIPHILA LONGIFOLIA* Turcz.

This taxon is now known as *A. mollis* var. *longifolia* (Turcz.) López-Palacios, which see.

*AEGIPHILA LONGIPETIOLATA* Moldenke

Additional bibliography: Moldenke, *Phytologia* 25: 417. 1973; Soukup, *Biota* 11: 4. 1976.

*AEGIPHILA LOPEZ-PALACII* Moldenke, *Phytologia* 36: 52—53. 1977.

Bibliography: Moldenke, *Biol. Abstr.* 64: 4787. 1977; Moldenke, *Phytologia* 36: 32 & 52—53. 1977.

Citations: ECUADOR: Pichincha: López-Palacios 4237 (Z—type).

*AEGIPHILA LOPEZ-PALACII* var. *PUBESCENS* Moldenke, *Phytologia* 36: 53. 1977.

Bibliography: Moldenke, *Biol. Abstr.* 64: 4787. 1977; Moldenke, *Phytologia* 36: 32 & 53. 1977.

Citations: ECUADOR: Pichincha: López-Palacios 4201 (Z—type).

*AEGIPHILA LUSCHNATHI* Schau.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 9. 1858; Moldenke, *Phytologia* 27: 294. 1973; Hocking, *Excerpt. Bot. A.23*: 293. 1974; Moldenke, *Phytologia* 31: 293. 1975.

AEGIPHILA MACRANTHA Ducke

Additional bibliography: Moldenke, *Phytologia* 27: 354. 1973. The Steyermark 88157 collection is represented in the fruit collection of the New York Botanical Garden herbarium. Austin describes the "old fruit" as brown and found the species fruiting in June.

Ruiz-Terán & López-Palacios describe the species as "Arbusto más o menos recostadizo, inerme, 5—6 m. Hojas opositidecussadas, coriáceas, verde intensas y más o menos lucientes por la haz, verde claras, algo lucientes, por el envés. Cimas axilares, punculadas. Brácteas foliáceas, verde claras. Flores grandes, de unos 3 cm. de largo en la antesis, inodoras en la hora de la recolección (2 p.m.). Cáliz fructífero de  $\pm$  3 cm. de diámetro" and encountered it at 200 meters altitude, flowering in July.

Additional citations: VENEZUELA: Bolívar: Ruiz-Terán & López-Palacios 11569 (Ld); J. A. Steyermark 88157 (N). BRAZIL: Pará: Austin 4182 (E—2035850).

AEGIPHILA MAGNIFICA Moldenke

Additional bibliography: Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 103, 114, & 114. 1973; Moldenke, *Phytologia* 27: 84, 87, & 166 (1973), 31: 456 (1975), and 36: 30. 1977.

AEGIPHILA MAGNIFICA var. PUBESCENS Moldenke

Additional bibliography: Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 103, 114, & 114. 1973; Moldenke, *Phytologia* 27: 84 & 166 (1973), 31: 456 (1975), and 36: 30. 1977.

The Croat 22141, distributed as A. magnifica var. pubescens in some herbaria, is perhaps better regarded as representing A. mollis H.B.K.

AEGIPHILA MARTINICENSIS Jacq.

Additional bibliography: Jacq., *Select. Stirp. Amer. Hist.*, imp. 1, 26. 1763; Sweet, *Hort. Brit.*, ed. 1, 1: 322 & 323 (1826) and ed. 2, 416. 1830; Loud., *Hort. Brit.*, ed. 2, 550. 1832; Sweet, *Hort. Brit.*, ed. 3, 550. 1839; Schau. in A. DC., *Prodr.* 11: 652—653 & 655. 1847; Buek, *Gen. Spec. Syn. Candoll.* 3: 9. 1858; Jacq., *Select. Stirp. Amer. Hist.*, imp. 2, 26. 1971; Altschul, *Drugs & Foods* 245. 1973; Moldenke in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 102, 103, 111—113, & 114. 1973; Moldenke, *Phytologia* 27: 295 (1973) and 28: 452. 1974; Hocking, *Excerpt. Bot.* A.23: 293. 1974; León & Alain, *Fl. Cuba*, imp. 2, 309 & 310. 1974; Little, Woodbury, & Wadsworth, *Trees P. R. & Virg. Isls.* 2 [U. S. Dept. Agr. Agric. Handb. 449:] xii, 854—856, 991, 994, 997, & 1021, fig. 678. 1974; Troncoso, *Darwiniana* 18: 390 & 408. 1974; Molina R., *Ceiba* 19: 95. 1975; Soukup, *Blota* 11: 4. 1976; J. F. Morton, *Quart. Journ. Crude Drug Res.* 15: 182—183. 1977.

Additional illustrations: Little, Woodbury, & Wadsworth, *Trees P. R. & Virg. Isls.* 2 [U. S. Dept. Agr. Agric. Handb. 449:] 855, fig. 678. 1974.

[to be continued]